DOCUMENT RESUME

ED 034 998 CG 003 975

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TITLE	The Application of General Semantics to the Classification of Mentally Retarded. Research Report No. 17. Work Adjustment Project.
SPONS AGENCY	Department of Health, Education, and Welfare, Washington, D.C. Social and Rehabilitation Service.
PUB DATE	6 Aug 68
NOTE	15p.; Paper presented at the International Conference on General Semantics, Denver, Colorado, August 5th--9th, 1968
EDRS PRICE	EDRS Price MF-$0.25 HC-$0.85
DESCRIPTORS	Behavioral Sciences, *Classification, Communication Problems, *Communications, Identification, Intelligence Quotient, *Intelligence Tests, Mentally Handicapped, *Mental Retardation, *Semantics

ABSTRACT

The relevance of general semantics to subject areas in the behavioral sciences has been established many times over, although the application of the principles concerned does not always reflect acceptance. The problem of semantics as related to mental retardation has great importance as life affecting decisions are made in accord with beliefs and practices growing out of the use of the system. Some of the characteristics of a semanticly appropriate system are: (1) it would produce some desirable results, (2) it should allow better communication, and (3) there would be greater agreement among users on the use of the system. In examining outcomes beyond school, the classification system for mental retardation has even less success in prediction. One of the reasons that the mental retardation classification has continued is the involvement with the medical profession, where classification systems are very strong. Many problems that recur seem ample evidence of the results of ignoring the importance and relevance of general semantics principles in devising a classification system. (Author/KJ)

ED034998

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Research Report No. 17

Work Adjustment Project

University of Minnesota

September 1968

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Paper presented at the International Conference on General Semantics, Denver, Colorado, August 6, 1968

CG 003975

The Application of General Semantics to the Classification of Mentally Retarded

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The relevance of general semantics to subject areas in the behavioral sciences has been established many times over, although the application of the principles concerned does not always reflect acceptance. There are many examples of difficulty in sorting out the words, things, and relationships in what we call the behavioral sciences. Surprisingly, these bad examples are by no means limited to advancing research where lack of knowledge prevents precision in the definition and delineation of our observations. Indeed, it is in some of the long studied, centrally important concepts that the worst offenses can be found. Examples are found in the practices of behavioral scientists associated with the usage of the words and classifications in the study of mental retardation. There are several reasons why the procedures used should show considerable semantic refinement. Efforts to deal scientifically with the phenomenon go back almost a hundred years. Concerns both in the earliest applied and experimental behavioral sciences had to do with intellectual abilities, the identification of the faculties involved, and the identification of persons with more or less of these abilities. It was in measuring intellectual abilities that Binet started what is now a large part of modern psychology. Many theoretical issues of importance to the behavioral sciences are based on the study of man's intellectual and cognitive abilities. Furthermore, the procedures used in the definition, classifications, and terminology associated with mental retardation are of great

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This paper was supported, in part, by Research Grant RD-2568-P from the Social and Rehabilitation Service, U. S. Department of Health, Education and Welfare.

importance to the public. They are not internal definitions or conventions of significance only to the interested initiate. Rather, life-affecting decisions are made daily in accord with the beliefs and practices growing out of the use of the system.

Thus, the problems of mental retardation have been long studied and are of great theoretical and practical importance. To see if this long study and important status has led to sophisticated classification systems, we can look first at some of the current practices.

People classified as mentally retarded can be divided into several groups. Those persons at the extreme bottom of the range of intelligence, considered profoundly retarded, are usually the victims of some obvious central nervous system damage or disease and are incapable of useful speech or self-care. Their retardation is usually evident at or soon after birth, identification is usually made by a physician, and their usual treatment is placement in an institution. A second, larger group called mentally retarded are persons of somewhat greater ability. They are able to function more effectively, learning useful speech and self-care, possibly capable of learning vocationally useful skills. Many have apparent nervous system disease, but the severity of their symptoms is not as great as in the profoundly retarded. These subjects, often called "trainables", may be classified as retarded during pre-school years but are most certain to be noted when they enter school and have trouble learning. The process of identification and diagnosis often includes the services of a psychologist who administers an individual intelligence test. A third, and by far the largest group, includes the most intellectually able of the mentally retarded. It is in dealing with this borderline group that classification systems have the most difficulty since the bulk of those persons called mentally retarded are in this

category and are only a few points on the continuum from the arbitrary point that separates them from "normals". Persons in this group are sometimes called "educables". They are able to learn self-care and vocationally useful tasks and are able to profit from some academic subject teaching. They do not necessarily have noticeable physical defects, and it may not be until they have been in school for several years that they are identified as mentally retarded. They are frequently from the lower socioeconomic classes, often minority group members. Identification and diagnosis is usually done by the school teacher and psychologist.

Scientific efforts to define and classify the mentally retarded have been carried on throughout this century. Many authors and experts have proposed what they felt were meritorious new systems, and several organizations have advanced proposals. The UN has a recommended system as does the American Psychiatric Association. The American Association for Mental Deficiency has appointed committees to develop classification systems starting in 1919, with the fifth and most recent system published in 1961 (Heber, 1961). Issues discussed again and again throughout the years have included questions of the essential nature of mental retardation, its curability or permanence, its relationship to mental illness, the means of testing intelligence, and the role of social adjustment in classifying mentally retarded. These questions and many others recur without satisfactory resolution throughout the professional literature of this century. Inability to resolve the problems of definition and classification suggests that there must be an ignorance or misapplication of basic semantic principles in the process of establishing the system. We can see if this is true by first suggesting how some of the principles of general semantics might be applied to the classification of mentally retarded and then seeing how well these principles are actually being used.

What are the characteristics of a semanticly appropriate system?

Primarily we might suppose the classification system would work, would produce some scientifically and technically desirable results. The system should allow better communication by summarizing large amounts of information about individuals in neat, easy to handle packets. We would expect that great agreement would have been reached among users of the terms as to how the system should be applied, so that in most cases discourse could begin at a level deeper than whether state of affairs X should or should not be called Y. We would expect that at least in some cases the system should have extensional definitions. One may not be able to point to "a mental retardation", but one should be able to point to specific attributes of people who bear the label. It might also be supposed, if the system is to have any usefulness beyond a nominal one, that individuals within a class are like one another in more characteristics than what was measured to put them in that class, and furthermore that these characteristics have some important predictable result. Placing a person within a class should increase the probability that he will possess a particular set of traits, or that he will benefit from certain treatments and suffer from others, or that a particular outcome is likely. If the process of classification is especially expensive in comparison to the alternative methods of deciding treatment or predicting outcomes, then the implications of that classification must be more vital or more certain. The classification system used should be multi-valued if important characteristics of what is to be classified are multi-valued, so that the system does not obscure when it should illuminate.

Does the professional and scientific usage of the classification systems follow these reflections of general semantics principles? There is much evidence that it does not and that ignorance of some of general

semantics principles costs a great deal in money, wasted effort, and actual harm to people. There is evidence that agreement on the use of the words and labels is not great, especially when the importance of the system and the time spent in its development is considered. In a recent survey of the systems in use, Gelof (1963) found 23 major classificatory systems proposed and used by the various prcfessional, institutional, and governmental groups and individuals interested in the field of mental retardation. These systems differed not only in the words used as labels for similarly described phenomena but also in the phenomena referred to by the same words. Thus, the same person could be given one of eight or ten labels, depending upon which system was used by the person diagnosing him.

Most of the systems avoid a great reliance on that fearful instrument, the intelligence test. Although they mention IQ scores as cutting points or areas for dividing up the population, most insist on the use of some kinds of judgments in addition to a low score on the intelligence test. The classification system of the American Association of Mental Deficiency (Heber, 1961), for example, requires that the subject show symptoms of retardation in social, developmental, or learning abilities as well as a low IQ before classification as a mental retard can be made. The IQ score is introducted defensively, with full recognition of its defects and the requirement that other interview and history data be included in the diagnostic workup.

This breadth of basis has several results. It increases the variety of subjects included in the system since some are included on the basis of one set of characteristics and others on another. It increases the probability that a borderline individual will be included in the system since even though he is outside the system on one dimension, he may be

below the line on the other. Such a breadth gives a false sense of assurance to a classification, as though several measures of low reliability could in concert yield a reliable judgment. Such breadth increases the cost and investment required for classification. One of the ultimate results of such a multiply determined, multiply based classification is a reduced consistency in the people who are labelled the same. One may have a relatively high IQ but have had trouble in getting along with his peers. Another may bear the same label because of a lower IQ and difficulties in school work. Still a third may be included in the same group because of low IQ, poor school work, slow development, and social retardation, all due to what might more accurately be diagnosed as an emotional problem.

With such a diversity of subjects included within the same categories, it might not be surprising if predictions based upon this classification system might be somewhat less than perfect. This is indeed the case, at least for some of the predictions made. Educational decisions, for example, are often based upon this classification system. Indeed, it is in school that diagnosis as a mental retard is often first made, and it is for predicting school work that most of the intelligence tests in use were developed and validated. It should not be surprising that most persons called mentally retarded do not do well in school. Of course, neither do many persons who do not get labelled as mentally retarded. This need not destroy the usefulness of the label if some other kinds of inferences can be made on the basis of the classification. For example, are persons called mentally retarded likely to require a particular kind of classroom experience so that the classification can be used to guide their education? Such an assumption seems reasonable and is in fact the basis for an extensive system of special education. But that the mentally retarded school boy is indeed helped in his learning and adjustment by his

special class experiences is not necessarily so. Research on the results of special class placement is equivocal (Sparks and Blackman, 1965). This may be because the tools of special class teaching are not yet well enough developed. It may also be the case that mentally retarded persons are so unlike one another that any special system of teaching does not result in uniform benefits, any more than the regular system does.

In examining outcomes beyond school, the classification system has even less success in prediction. When persons labelled mentally retarded during their childhood and adolescent years are followed up as adults, their status on a variety of social, personal, and economic variables are scarcely different from a similar group not called mentally retarded (Goldstein, 1964). Of course, few mental retards grow up to be physicians, attorneys, or college professors, but the same can be said of most of the population. Persons once called mentally retarded do, however, find their way into a wide variety of jobs. Many of them are in adulthood indistinguishable from their workmates, raising families and contributing to society in ways that their early classification would not have predicted.

Although many researchers pay at least lip service to the merit of using "mental retardation" as an arbitrary designation for the lower end of a continuum of a specific kind of ability, much of the research done is devoted to specifying the "essence" of the term, with prime candidates being such things as the permeability of concept boundaries, the lack of short term memory, cultural deprivation, and "love hunger". Such research seems to presume that since we can name the classes and put people in them, then the people in the classes must have something that people outside the classifications don't have. What began as a category of convenience is now guiding much research; research which turns out to yield inconsistent and equivocal results. With such a variety of ways for putting persons in the

classification, "mentally retarded", it is not surprising that they tend to be heterogeneous, with a variety of "essences".

There are many reasons why such a semantically muddled classification system developed despite the scientific training and ability of the professionals involved. One reason seems to be the involvement of the medical profession, necessary through the association of many kinds of disease, illness, and physical defects with mental retardation. Medical handling stresses the importance of diagnostic classification based on etiology with specific treatment then implied by the "cause" of the problem. Another reason is that there are self-fulfilling prophesies inherent in the system. A person is first labelled "mentally retarded" on the basis of a suspected status which has inplications for certain predicted outcomes. He is then treated in a particular way, deprived of the usual educational, social, and vocational experiences and opportunities. The accuracy of the earlier classification is then "proven" by his eventual atypical status on these dimensions. Third, researchers seeking the "essence" of mental retardation sometimes compare the characteristics of mental retards who have spent much of their lives in special classes or institutions with age-sex matched normals, and then attribute the differences found to the "mental retardation" of their experimental group. With such factors as institutionalization, experimenter bias, halo effect, and criterion contamination at work, a person once called mentally retarded is almost certain to show the characteristics we attribute to mental retardation. Fourth, our ability measurement tests are usually designed for use in educational settings, for use in making educational decisions. They utilize similar formats, and measure various aspects of motivation, test taking skill, and verbal facility in addition to the ability which the test is being used to measure. As a result,

persons who are similar in performance on the measure used to classify them as mentally retarded (e.g., an individual intelligence test) will also be similar on measures of a wide variety of other abilities. This seems to validate the practice of such classification but may be based on no more than the similarity of like classed subjects' test taking abilities. Fifth, the practice of lumping many kinds of mental retards in a single group has a further effect in the self-justification of classification when some non-intellectual characteristics are examined. Sometimes surveys of groups of mental retards are taken to find their status on, for example, speech problems. Since many of the persons in such a group will suffer from physical and central nervous system damage of one kind or another, such as cerebral palsy, it should not be surprising that the incidence of speech and articulation problems will be greater than it is in a "normal" group. This difference from normal incidence is then reported and noted as though it were a part of mental retardation rather than being related to a state of affairs which is sometimes also associated with what is called mental retardation. Such a confusion of the associations of some of the medical-social-societal-economic progenitors of mental retardation with the results of mental retardation is a frequent occurrence.

If we have found evidence that the classification of mental retardation should but does not fulfill certain relevant general semantics principles, is there any reason why the system should continue as it is? Is there any justification for using a system that seems to be producing little in the way of improved predictions or treatment and which depends at least in part for its justification on historical accidents and self-fulfilling prophecies?

One justification may be the advancement of science. Classification

systems do not spring forth full grown with immutable and accurate keys and legends for each cell. The history of science is full of examples of where a syndrome or condition was noted long before the etiology of the condition in each individual case is known. Subgroups in each group exemplifying particular manifestations of the syndrome can be isolated, studied, and their nature better known. In this way, the overall classification loses significance as the subgroups within are better understood and identified. This justification would stand up better if more time were being devoted to the identification and study of homogeneous subgroups within the overall classification of the mentally retarded. Little notable progress has been made in the sharpening of the classificatory tools for any segment of the mentally retarded except for those portions where the retardation is linked with some disease or inherited condition.

Another argument may concede that the measure that brings persons identified as mental retards together is indeed only their performance in certain verbal ability tasks closely related to book learning and that the other characteristics are adjuncts, often spurious, of the classification system itself. But, this argument says, such verbal abilities are vitally important, and it is worthwhile to classify our citizens on that basis. And what person at all versed in general semantics can deny the importance of the verbal symbol in mastering our world? This reasoning is valid to a point, and it would be difficult to claim that verbal abilities are irrelevant to living. But there is no need to include so many other kinds of abilities and characteristics in the classification. We should classify and treat people who have trouble with book learning on the basis of their trouble with book learning rather than book learning plus something else.

An additional difficulty growing out of the system as it is used

today is the false explanation the system offers for problems noted within the individual or within the educational system. Once a person is labelled as mentally retarded, it is easy enough to use this label as the explanation for all sorts of deviant social and personal deficiencies, many of which might be better diagnosed and remedied were it not for the easily applied "explanation". Similarly, failures of our classrooms to teach the retarded needed skills are often blamed, not on the teacher nor on the educational system, but on the inability of the retard to learn.

The problems that arise seem to be due to ignoring the substantial inter- and intra-individual differences of persons called mentally retarded. Although elegant classifications can be created, the people placed within the cells continue to show individuality and multi-dimensionality. Even brief efforts to measure the abilities and personalities of "the mentally retarded" reveal great differences between and within individuals on many important dimensions. A group of mental retards was evaluated as part of a larger study at the Work Adjustment Project at the University of Minnesota. On an ability test battery the group's performance on verbal ability subtests was quite low. When measures of dexterity and other non-verbal abilities were administered, the group's performance was much more like a comparison group of non-retarded subjects. Similarly, the variety of responses on a questionnaire designed to measure work needs was as great as the responses of the non-retarded. Obviously, any classification based on the notion that the mentally retarded are alike on many vocationally relevant ability and need dimensions will fail to be effective.

How could the teachings of general semantics be better applied to the labelling and classification of"the mentally retarded"? One relatively

simple but far reaching step would be the de-reification of the concept. If we recognize that in classifying the best we can do is to simply seek a useful ordering to an underlying continuum of a particular set of abilities, then we can stop wasting time looking for the "essential nature" of the people we choose to place there. We might also recognize the result of our labelling. Many in the field are aware and try to avoid the promiscuous application of the label. However, the full impact of labelling is probably not recognized. If some way could be found to give needed educational and other attention to needful individual students without calling them retarded, their needs might be served without causing additional problems and without assuming that because they all have trouble, they are all alike. Further, the time honored semantic device of indexing might serve to achieve some of the desired results. If we could remember that mental retard$_1$ is not the same as mental retard$_2$, or even that Educable Mental Retard with a Stanford-Binet IQ of 65$_1$ is not the same as Educable Mental Retard with a Stanford-Binet IQ of 65$_2$, many of the dangers and problems associated with our classification system would be reduced. We do gain information about a person when we know his classification, but that information is about a limited ability, not about everything he does and everything he feels. In addition, we should index abilities in order to remember that ability$_1$ is not ability$_2$, to measure one is not to measure all.

This multi-valued orientation should not be difficult for the scientists and professionals working with the mentally retarded. The concept gets lip service in the often repeated admonition to "remember that the mentally retarded are individuals". This desired individualizing could be better maintained if the end result of the diagnostic work-up were not assigment of the subject to a particular cell in a classification

system but rather an evaluation of the person's many abilities and the many facets of his personality. Such a system requires that the same tools of measurement be developed for the mental retard as are available for the normal. We do not, after all, suppose that we know all that is relevant about a young person seeking vocational guidance when we say that he is in the normal range of intelligence. If we are interested in knowing him or helping him to make decisions about what to do, we seek to know about him on many dimensions. How well does he work with numbers? Is he quick with simple motor acts? How well can he use his hands in tasks requiring fine finger dexterity? How much can he lift? Does he like to work alone? Does he need to make a lot of money? There is no reason why we should not ask these questions about the man called mentally retarded. They can be answered, if the people concerned will recognize the importance of asking them.

The ultimate question which might be asked of any mental retardation classification system is: Is it effective? Unquestionably, most of the people included in the mental retardation category share in lacking a set of abilities that are important in many of today's activities. But does the classification hide more than it reveals? Are individuals who are alike on these attributes really alike on many others, or do we create alikenesses through our perception and handling of them? Are they as a group really unable to learn and function usefully, or is part of the problem our inability or unwillingness to teach in ways that they can profit from? The evidence seems clear. Recurrent problems in devising a classification system that will be satisfactory will not be solved by changing the names or shifting the criteria for categories. The problems that recur seem ample evidence of the results of ignoring the importance and relevance of general semantics principles in devising a classification system.

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